CHAPTER 5. FINDINGS AND NEXT STEPS

The results of Phase 2 study present some compelling conclusions about the most appropriate transit services and the land use policies for the study area. The most significant conclusions are that:

- A transit "network" approach provides important synergies by linking existing residential and future growth areas with key employment destinations and regional transit nodes.
- Transit ridership is directly affected by the future land use, especially around the new station sites. Ridership would increase by 25-30 percent with Transit Oriented Development.
- A Tri-Valley transit investment will be productive and cost-effective if it can serve several travel markets by providing:
    1. Fast and reliable connections from Tri-Valley and Central Valley homes to regional travel destinations such as Oakland, San Jose or San Francisco via BART,
    2. Circulation to Tri-Valley job centers by attracting "reverse commute" transit riders from the inner Bay Area,
    3. Direct service from the Central Valley to Tri-Valley employment centers, and
    4. Fast and frequent service for intra Tri-Valley travel.

By capturing all four of these travel markets and serving corridors conducive to transit success, Options 1, 2 and 3, and the BRT component of Option 4 all meet regional and national standards for transit extension investments. In fact, the alternatives are remarkable in their similarity, with a few major exceptions:

- Option 1's direct route through the densest population and employment centers produces the highest ridership and by far the lowest cost per passenger ride.

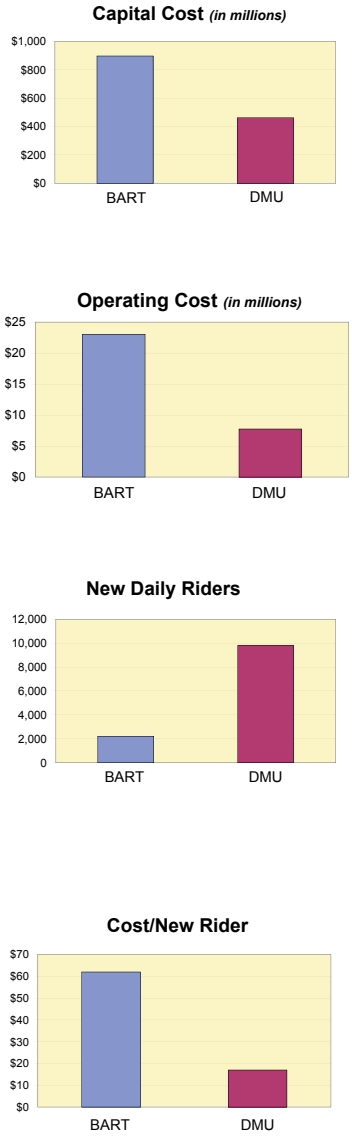
- The two-station median BART extension in Option 4 produces a third less ridership at twice the cost of comparable segments of the other alternatives. These results are due to the higher cost of BART technology and an alignment far from the population centers of the Livermore Valley.
- The bus component of Option 4 in the 680 corridor produces about a quarter less ridership than the other options, but it does so at three quarters less cost, resulting in a cost per rider figure that is half that of the other alternatives. These results are due primarily to the fact that an HOV lane is already programmed in the 680 corridor, and all the transit operator needs to run service is a few connector ramps to reach major destinations.
- The Heavy DMU service in Option 3 offers the unique opportunity to connect directly into a coordinated Central Valley rail network that would bring together ACE, Amtrak and BART. This network could be expanded incrementally at low cost to serve other cities such as Modesto, Stockton and Merced.

Figure 5-1
Summary of Findings

	Option 1 Light DMU via Iron Horse Trail & I-680	**Option 2** Light DMU via Dougherty Valley & I-680	**Option 3** Heavy DMU via Iron Horse Trail & I-680	**Option 4** I-580 BART Extension + Bus Rapid Transit
New Transit Riders	25,000	21,500	19,000	13,500
Capital Costs	$1.3 B	$1.4 B	$1.3 B	$1.2 B
Annual Operating Cost	$28 M	$30 M	$28 M	28 M
Farebox Recovery	58%	53%	46%	27%
Cost per New Rider	$18	$22	$24	$31
Cost per New Rider with TOD	$14	$18	$19	$24
Major Advantages	Highest Ridership and Lowest Cost per New Rider	Avoids most of Iron Horse Trail	Possible future low cost extensions in Central Valley	BRT service very cost effective in I-680 corridor; BART is favored in I-580
Major Issues	Iron Horse Trail Alignment	Circuitous route = higher cost, fewer riders	Fewer stops in Tri Valley = highest cost per rider among DMU	High cost, low productivity of median BART

Livermore-Amador Extension

Cost Comparisons: Phase 1 BART vs Phase 2 DMU



Since the total project from Walnut Creek to Tracy is not immediately fundable with known resources, it will be important to phase any BART expansion process. The likely first phase would be from the Dublin/Pleasanton station to Livermore. All three technologies (BART, light DMU and heavy DMU) and three alignments (Hacienda, East Pleasanton and I-580) are technically feasible. In addition, the three DMU options meet key cost effectiveness criteria, while the median BART extension does not. At a capital cost of $420- $470 million for an extension from Dublin/Pleasanton to Vasco Road, the DMU options would generate 6,000 to 9,000 new daily transit riders. As illustrated on the charts at left, compared to the median BART extension, the DMU options have:

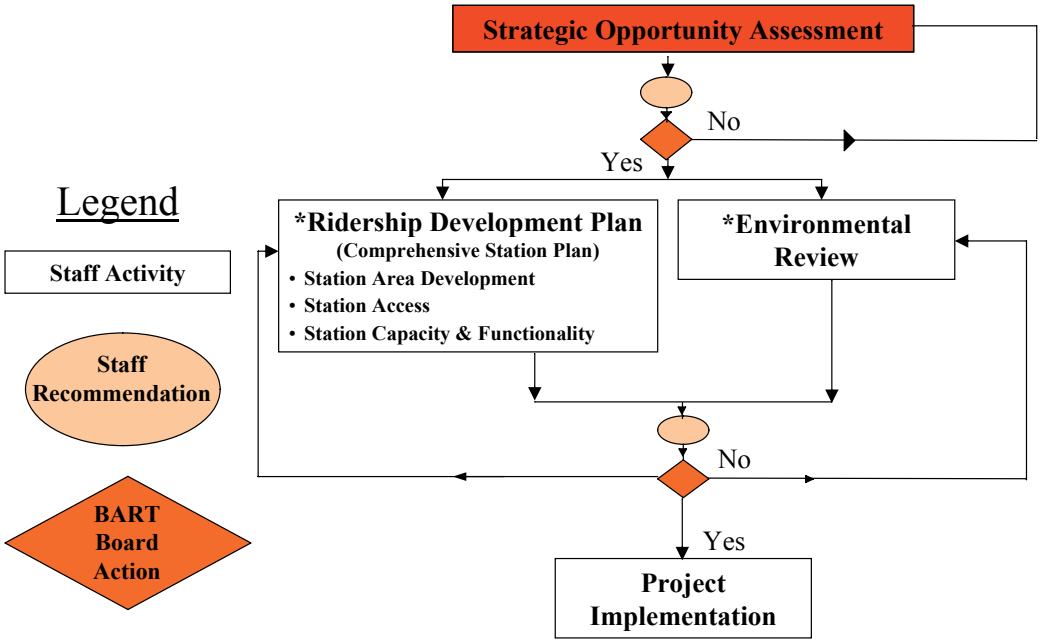
- Four times as many stations
- Four times as many riders
- Half the capital cost
- A third the operating cost
- A third the cost per new rider

BART Project Advancement Process

BART's System Expansion Policy outlines how BART projects move from conception to implementation. Once the I-580 Corridor Policy Advisory Committee has reached consensus on the preferred transit investment strategy, their recommendation, along with BART staff's recommendation using the System Expansion Criteria, will be brought forward to the BART Board. The Board will consider these recommendations and decide whether to advance the project recommendation to the next stage for further study.

The next stage of planning would be to conduct an Environmental Review and prepare the Ridership Development Plans. Ridership Development Plans are prepared by the local jurisdictions to consider local land use changes to reflect Transit Oriented Development at station sites, and/or pedestrian, bicycle, bus and vehicular plans that address station access. These plans will be coordinated with the design of each station to reflect local opportunities and constraints. Ridership Development Plans are prepared concurrently with Environmental Review and brought forward to the BART Board. BART staff will use both documents to evaluate the extension project with the System Expansion Criteria and decides whether to recommend a project for advancement into implementation. The BART Board then considers the staff recommendations and decides whether to advance project into implementation.

Figure 5-2
Project Advancement Process



Additional Items

In additional to environmental review and substantial coordination with all local communities in the study area, the consultant team has also identified several additional next steps:

- Run the Northern California Railroad Advisory Policy Group rail capacity model to determine how new tBART service could be coordinated with existing and future freight and ACE service.
- Coordinate with ACE and upcoming regional rail efforts to identify right-of-way strategies and ensure that ACE can continue to improve its service successfully.
- Coordinate discussion on future linkages to San Joaquin County with key stakeholders should there be sufficient interest.
- In coordination with all the above efforts, develop a plan that would likely include initial service from the Dublin/Pleasanton station via downtown Livermore to Vasco or Greenville roads.